Whately on Authority, Deference, Presumption and Burden of Proof

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Abstract: This paper shows how Whately's view of presumption as a preoccupation of the ground plays an indispensable role in the study of persuasive aspects of appeals to authority and deference. This is done by showing how important connections among arguments from authority, presumption, burden of proof, and deference can be precisely defined, combined, and fitted into a formal argumentation framework for responding to arguments from expert opinion and analyzing the *ad verecundiam* fallacy. As the inquiry into Whately's ideas also reveals links between Aristotelian topics and dialectic later brought out by Perelman, it constitutes an illustration showing how the study of various historically important rhetorical ideas allows us to develop contemporary models of arguments.

Keywords: appeals to authority, argumentation systems, AI, shifting burden of proof.

1. Introduction

The aim of the paper is to show that Richard Whately's historically important rhetorical ideas play an indispensable role in the contemporary study of persuasive aspects of appeals to authority and deference, in connection with presumptions and burden of proof. In particular it will be shown that Whately's remarks on presumption, burden of proof, and authority suggest a solution to the problem of how to evaluate an argument from expert opinion using argumentation schemes and matching critical questions. When a proponent puts forward a claim that is supported by a respected expert, in Whately's framework, recognition of this authority based on. Whately defines *deference* (as shown in section 2), as a kind of habitual presumption that shifts a burden of proof to the side of the other party in an argumentative discussion. The respondent may need to defer to the authority quite legitimately in some instances, and therefore need to accept the claim made by the authority, at least tentatively, subject to further discussion in which new evidence is brought forward. In terms of recent computational models, it would be said that Whately's analysis recognizes that arguments from expert opinion are defeasible, meaning that they are subject to defeat if new evidence is brought into the current discussion or inquiry. These new advances in formal argumentation systems also open the way to getting a much better grasp of how authority is connected to presumption, and how the key notion of deference to authority plays an important role in helping us to evaluate cases where presumptions move back and forth in a dialogue in which an argument from expert opinion is involved. Building on the work of Perelman and Olbrechts-Tyteca (1969), they advance Aristotle's theory that rhetoric and dialectic (Aristotle, 1937) are closely connected. The new rhetoric of Perelman and Olbrechts-Tyteca studied the common forms of argument (*topoi*) used both in rhetoric and dialectic according to Aristotle in his *Topics*. A list of twenty-eight such topics can be found in Aristotle's *Rhetoric* and thirteen comparable argumentation schemes can be found in *The New Rhetoric*. They have been listed and compared in a table by Warnick (2000).

What is most interesting is that Whately's view of presumption as a preoccupation of the ground has helped to throw light on the connection between appeal to authority, on the one hand, and presumption and burden of proof, on the other. His approach suggests that argument from expert opinion and argument from administrative authority can be combined to provide a

framework for analyzing the *ad verecundiam* fallacy. How argument from expert opinion works as a defeasible species of argumentation in this view is that when such an argument is put forward, it is best seen as not conclusive, but as putting a presumption in favor of accepting it in place, in such a manner that anyone who wants to dispute the argument must critically question it or put forward a counterargument. The problem is how to keep track of and rule on moves in a sequence of dialogue where presumptions shift back and forth. This problem is solved by mapping the sequence of dialogue into an argument diagram. The effect of putting a presumption in place by means of using an argument fitting a defeasible argumentation scheme is that certain requirements framed by the dialectical nature of the exchange between the two parties kick into place. In particular, requirements of burden of proof appropriate for the dialectical exchange, set into place at the opening stage, determine a burden of proof (Walton, 2014). The party who initially brings the action or makes the ultimate claim has the burden of proof of supporting it with arguments and this burden is shifted back and forth by presumptions.

Section 2 outlines Whately's approach to the concepts of burden of proof, presumption, authority in his writings, and suggests how they are connected to the *ad verecundiam* fallacy, the fallacious type of argument from authority. This section also shows how shifts of burden of proof and presumption can be naturally framed abstractly in a dialectical framework as a sequence of moves in an orderly dialogue, and introduces the reader to the link between Whately's views on presumption and his related views on authority and deference. Section 3 surveys current theories of presumption. Section 4 introduces the reader to modeling shifts in burden of proof and presumptions using a dialogue format. Section 5 describes how arguments from expert opinion are analyzed and evaluated in current argumentation systems by using critical questions. Section 6 presents a short and simple example to show shifts in a burden of proof can be evaluated by mapping the dialogue representation of the given sequence of argumentation into an argument diagram. This section also shows an even more intuitive way of modeling shifts in a burden of proof using a dialogue structure. Section 7 draws some conclusions.

2. Whately's view

In his *Elements of Rhetoric* (1863, pp. 72-85) Whately described a presumption in favor of a proposition as a preoccupation of ground (p. 72).

> According to the most correct use of the term, a 'Presumption' in favour of any supposition, means, not (as has been sometimes erroneously imagined) a preponderance of probability in its favour, but, such a *pre-occupation* of the ground, as implies that it must stand good till some sufficient reason is adduced against it; in short, that the *Burden of proof* lies on the side of him who would dispute it.

But there is an important question to be asked (Freeman, 2005, p. 24): what does it mean to say that a supposition preoccupies a ground, and how was this recognized? Whately (1846, 113-114) illustrated his idea using the military metaphor of an army in a strong fortress that commits the error of staying within this defensible area and instead moves out of it to make a disastrous attack on the enemy. This is a compelling metaphor when applied to the idea of presumption, suggesting that it could be a strategic error for the arguer accused of wrongdoing, who tries to justify the claim that what he did was not really wrong, instead of attacking the accuser's claim by saying that he has no right to make such a claim unless he can give evidence to back it up. The latter reply is essentially one of shifting the burden of proof to the other party.

To explicate this metaphor Whately introduced the notion of burden of proof. What he seemed to be saying is that a presumption is something (a proposition) that is tentatively accepted and that stands, even though the argumentation given to support it is not sufficient to prove it. Instead, the burden of proof shifts to anyone who would oppose it by offering a sufficient reason not accept it. Gronbeck (1966, p. 83) showed that Whately's view of presumption as related to burden of proof had clear precedents in the law of his time, but also that his development of the concept of presumption was different from those of his ancestors in law.

Whately's work on his *Elements of Rhetoric* grew from an original article of approximately 70,000 words to a book of around 127,000 words, an increase of 80% (Sproule, 1976, p. 117). His treatment of presumption and burden of proof did not appear until the third edition of 1830, and was added to in the three subsequent editions of 1836, 1841 and 1846 (Gronbeck, 1966, p. 79). Hence his theory needs to be treated as evolving and being substantially modified during successive editions of the book. In the early versions, presumption was introduced as a rule-based or legal notion (Sproule, 1976, p. 118). As the theory proceeded to be modified, presumption began to be taken as a psychological notion. In the well-known fifth edition, the legal assignment of presumption began to be overturned by a psychological notion of presumption (Sproule, 1976, p. 120).

At that point in the development, Whately introduced the important idea that presumption may vary according to audience membership. This idea makes presumption not entirely either legal or psychological. It is conjectured here that as Whately's theory was further developed and became more sophisticated, it was transformed into what would nowadays be called a dialectical theory (Tindale, 2015). It began to see presumption as what is nowadays called a speech act, representing a kind of move made by a proponent in an argumentative setting directed to an audience. The dialectical aspect is that there can be normative rules (protocol) governing how the respondent, in this instance the audience, is influenced by the move and can either accept what is recommended by the move or not. The procedure represents a kind of dialogue between the speaker and the audience.

Whately, in his *Elements of Logic*, distinguished between two senses of the word 'authority'. To illustrate the meaning of this word used in its primary sense, he offered (1870, p. 194) the example of correcting a reading in a book on the basis of an ancient manuscript, based on the authority of a historian. This meaning of the term 'authority' seems like it would mainly refer to expert opinion, but it could also partly refer to another kind of authority. Whately (1870, p. 194) also refers to another sense of 'authority' when the word is employed as equivalent to the word 'power', for example when we speak of the authority of the magistrate. He writes that this kind of appeal to authority is a claim to obedience. He distinguished between two senses of 'authority', an epistemic kind of authority typical of appeal to expert opinion and an administrative kind of authority which commands obedience and represents an exercise of power, for example judicial, institutional or military power.

In the one sense of the term, he tells us, 'authority' refers to someone's testimony or judgment, such as the authority of an ancient manuscript or the authority of some historians. He makes no mention of the term 'expertise' in his description of this sense of the term 'authority', but describes this meaning of the term as a claim to deference, which he defined as 'a habitual presumption' to this kind of authority (Whately, 1846, p. 118). To illustrate his second sense of the term 'authority', as noted above, Whately gives the example of the authority of a magistrate.

This meaning fits the notion of an administrative authority, and is comparable to Goodwin's (1998) notion of authority as command.

Whately does suggest that "many instances may be found in which writers have unconsciously slipped from one sense of the word to another, so as to blend confusedly in their minds the two ideas." (Whately, 1870, p. 194). This hypothesis seems to be a precursor of the recent idea that the *ad verecundiam* fallacy sometimes arises from the confusion between the expertise notion of authority and administrative notion of authority (Walton, 1997, p. 250).

Hansen (2006, p. 331) proposed an analysis of why appeal to authority can be fallacious which appears to be an extension of the analysis of the fallacy given by Whately. According to Whately's analysis, found in the seventh and last edition of his *Elements of Logic*, the key notion in analyzing the fallacy is that of deference. Whately, in his *Elements of Rhetoric*, (1863, pp. 72-85) took the view that arguments from authority are presumptive, so that if the one to whom such an argument was directed fails to accept it, he is the one who has the burden of proof to give reason to support his nonacceptance (Whately, 1863, p. 72). In his analysis, presumptions occupy an epistemically privileged position as propositions made temporarily acceptable on the basis of reversal of normal burden of proof in an argumentative dialogue sequence in which two parties take turns making moves. Whately made it clear that this procedure of shifting presumptions back and forth is not based on probabilities, but on obligations to defend a claim that been put forth by one side and questioned by the other side. This view combines logical with rhetorical notions and was based on principles of evidential legal reasoning, especially the notions of preoccupation of a ground and deference known to scholars of jurisprudence before Whately's time (Gronbeck, 1966, pp. 52-77). Whately argued that in everyday argumentation just as in legal argumentation, the onus is initially on the party who made a charge or claim, and the subsequent shifts of presumption from one side to the other and back are determined by the moves made by each side and the initial burden of proof put in place at the opening stage. The proponent of the claim must offer some evidence to prove any assertion if challenged to do so by a questioner. In the case of a presumption however, a proposition may be put forward to be accepted tentatively until an argument has been brought against it. Such an invocation of the notion of presumption can be used to exempt the party making a claim to provide arguments to back it up.

This analysis of appeal to authority is a rather complex one because it involves the parties taking turns in a dialogue where making a move of a certain kind, such as making an assertion, can impose obligations on one or both parties to respond in some particular way as required by the rules (protocols) of the dialogue. Such dialectical ideas were a novelty in Whately's time, and not well understood or accepted until the advent of modern argumentation theory (even though they were known to the ancient Greek philosophers, such as Aristotle). Thus Whately had many critics who attacked and belittled the significance of his approach to presumption and burden of proof (Gronbeck, 1966, pp. 30-51). It is argued in this paper the reason was their failure to comprehend what he was trying to do, and this failure in turn can be understood by seeing how his basic notions of presumption, burden of proof, deference and argument from authority have been precisely analyzed in current work on formal models of argumentation in artificial intelligence.

3. Current theories of presumption

Ehninger, for instance, wrote that the ideas of presumption and burden of proof were "concepts which Whately was the first to transfer from the law of evidence to the general field of non-legal argumentation" (Ehninger 1963: xix).

However Cronkhite (1966, p. 270) claimed that Whately's theory of presumption, based on his notion of deference was primarily a psychological idea, taking presumptions to reside in the minds of the audience to whom an argument was directed. Freeman (p. 24), describes Whately's later view of presumption as psychological, because it depends on what the audience accepts. Sproule (1976, p. 23), as indicated above, showed by careful textual analysis that the notions of presumption and burden of proof underwent an evolution during the numerous editions of the *Elements of Rhetoric*. He represented this evolution as beginning from the claim that a presumption was a legal notion that morphed into a different notion of presumption that is viewed as referring to a proposition accepted by the audience to whom the argument was directed. On this later view, according to Sproule (1976, p. 122) presumptions are made or accepted by an audience who accept the proposition at issue as required for successful application to a dispute. The second view of presumption makes it close to what is often nowadays called common knowledge, representing a set of propositions that the given audience will not be prepared to dispute (Walton and Macagno, 2006; 2012). How common knowledge works in everyday argumentation can be compared to judicial notice in law, where a judge can declare a proposition like 'Cows commonly eat grass' or 'A sharp knife can cut you.' as not subject to disputation by either side in a trial proceedings. But this is hardly the only view of presumption found in the recent literature.

Ullman-Margalit (1983, p. 147) defined presumption as a species of inference from a presumption-raising fact to a proposition presumed to be true on the basis of this fact and a presumption formula that sanctions the inference from the presumed fact to a conclusion. She emphasized the practical nature of presumption and its connection with the form of reasoning called argument from absence of evidence, often called argument from ignorance in traditional philosophy. She described presumptions as guides useful for practical deliberation in cases where there is an absence of information or conflicting information to meet the required standard of proof but some determination needs to be made to enable an investigation (p. 152). She emphasized the defeasibility of presumptive inferences, stating that they are subject to exceptions, and can be defeated by new factual information in a case (p. 149).

Freeman (2005, p. 22) dismissed Ullman-Margalit's theory of presumption as representing only a legal concept of presumption, one that is not applicable to describing how presumptions are made in natural language argumentation outside the legal context. His reason for this dismissal, (2005, p. 23) is that legal presumptions and burdens of proof are distinctly stipulative in nature. In his view, what premises are to be acceptable as parts of presumptive reasoning and what conclusions can be drawn from them cannot be simply stipulated, as applied to presumptions outside the legal setting. He concludes that there must be other senses of presumption that can be applied in situations outside formal legal proceedings and that his aim is to provide an analysis of this sense of the term 'presumption'. Freeman, in general, draws a contrast between the legal notion of presumption which he describes as 'stipulative', and the ordinary view of presumption in conversational discourse, which does not have this stipulative property.

Pinto (1984, p. 17), wrote that a proposition has the status of the presumption at a given point in the discussion if and only if any participant in the discussion who refuses to accept the proposition at that point is obliged to present an argument against it. This definition of the notion

of presumption fits with the account given above. We argue that it is a consequence of this definition that a presumption is a type of move or speech act made in a dialogue exchange between two (in the simplest case) parties where one party puts a proposition forward for acceptance that requires the other party to either accept the proposition or provide an argument against it. This consequence is often stated in what we take to be an equivalent way by saying that the putting forth of a presumption in a dialogue shifts the burden of proof against the party who is the respondent of the presumption-raising move.

According to the dialectical theory of presumption of Walton (1992), presumptions take the form of cooperative conversational devices that facilitate orderly collaboration for moving the successful resolution of a dispute forward in situations where there is a gap in the line of argumentation where a particular inference seems reasonable to draw but is too weak to meet the applicable standard of proof. Suppose a sequence of reasoning can go forward if a proposition *A* that is a necessary assumption in the sequence cannot be proved true, but could be acceptable as a tentative assumption supported by some of the evidence and not opposed by any of the evidence. The following principle might be adopted: even if there is not evidence sufficient to show that *A* is true, *A* can be presumed (tentatively) true, subject to later rejection if new evidence proves it false. Note that this principle is shared by Ullman-Margalit (1983), Pinto (1984) Cohen (1992), Freeman (2005) and Rescher (2006). Freeman's theory of presumptive acceptability (Freeman, 2005, 21) is based on the principle of presumption of Cohen (1992, p. 4) stating that a presumption is a proposition that may be taken for granted in the absence of reasons against doing so.

Following these approaches, the key characteristic of presumption as a speech act in dialogue is that it temporarily reduces an existing burden of proof governing a whole dialogue (such as a legal proceeding) by making an exception. Making such an exception requires temporarily adopting a lower standard of proof. Normally, the burden of proof is on the proponent asserting a proposition, but when a presumption is activated, this burden of proof shifts to the respondent, once the presumption has been accepted as a commitment in the dialogue. These approaches link burden of proof to presumption in ways that are compatible with Whately's view of how the two concepts work together. An initial burden of proof is set in place that determines how a presumption can occupy a ground that can be dislodged.

In the next section it will be shown how Whately's theory of a presumption as representing an occupying ground can be modeled using argumentation tools developed in artificial intelligence. We will show in section 4 how Whately's dialectical idea of resisting an opposed arguer's demand for proof by shifting the burden of proof back onto the side of the arguer can be represented in a dialogue format, as shown in table 1. Formal models of argumentation developed in artificial intelligence use two tools for modeling argumentation. One is the use of argumentation schemes, illustrated below by the example of argument from expert opinion. The other is representing argumentation as a dialogue exchange in which two parties take turns asking questions and putting forward arguments in such a manner that the burden of proof can shift from one side to the other as the dialogue proceeds.

4. Modeling shifts in the burden of proof and presumption in a dialogue format

How was presumption linked to burden of proof in Whately's writings? This linkage can be summed up as follows. His definition of 'presumption' was a 'preoccupation of the ground' (see the quotation from the *Elements of Rhetoric* above) so that when a claim is made that is

based on common knowledge, or what is generally accepted by an audience, it stands good until some sufficiently strong argument against it is brought forward. In a nutshell, the burden of proof lies on the side of the party who disputes a claim that rests on what is generally accepted by the audience. But Whately also argued that a disputant can shift the burden of proof back by countering with an opposed presumption. Or even better, the party advocating the argument (the proponent) should resist the respondent's demand for proof by shifting the burden of proof (BoP) back to the respondent's side, as shown in the dialogue sequence in table 1.

Moves	*Proponent*	*Respondent*
1.	*P*	Why should I accept *P*?
2.	*P* is a presumption.	I don't accept *P*. Prove *P*.
3.	You have to accept *P*, unless you have some evidence against it.	Why?
4.	Because *P* is a presumption.	The BoP is on you to prove *P*.
5.	No, the BoP is on you to disprove *P*.	No, the BoP is on you to prove *P*.
6.	No, the BoP is on you to disprove *P*.	No, the BoP is on you to prove *P*.

Table 1: Shifting the Burden of Proof

The problem illustrated in table 1 is that the dialogue can go on forever as the BoP shifts from the one side to the other. What is shown is that a presumption can properly shift a BoP, because it is impossible to prove everything. Some things have to be accepted as presumptions because they are based on common knowledge or reliable sources (endoxical propositions in Aristotle's sense – see Slomkowski (1997, 19)), and trying to prove them (when that is not necessary) would simply delay the dialogue, preventing it from moving forward.

For example, suppose the dispute was about the removal of an existing restriction. You might invoke the general presumption against change as an argument for your side. But the other side might reasonably reply by invoking the presumption that restriction is an evil, meaning that there is a presumption in favor of removing any restriction. This view was most controversial at the time Whately wrote, because the audience he wrote for generally accepted Christianity. Whately exploited this to argue that the burden of proof lies on anyone who would dispute the accounts given by the Gospels. Since this aspect of Whately's argumentation no longer so widely applies, it has often been taken as evidence that his views of burden of proof and presumption must be wrong (Einhorn, 1986). But as Hamblin (1970, 172) showed, this criticism unfairly makes Whately's view "so cavalier as to rest an argument for it, *ad verecundiam*, on the existence of the Church of England." As one with such a subtle grasp of how presumptions are tied to existing institutions, Whately would not have been at all uncomfortable with the idea that the audience to whom philosophical ideas must be addressed has changed greatly since his time.

Einhorn (1986) argued that Whately relied on a concept of argument that was an artifact abstracted out of the human process (Einhorn, 1986, p. 287). She argued that on Whately's abstract model, disputes involve only one issue, set in place at the beginning point of the disputation. She pointed out that if we examine examples of practical argumentation, however, they do not fit neatly into Whately's system, because real disputes generally tend to shift from one issue to another as the debate continues. This observation is fundamentally interesting for all aspects of recent argumentation theory, which generally assume that the conflict of opinions sets the issue to be disputed at the opening stage of a critical discussion (Walton, 2014). It is generally assumed that the argumentation stage is conceptually later, or secondary to the initial opening stage. The protocols set at the opening stage are taken to be binding through the

sequence of the argumentation stage and to the closing stage as well, determining which side is the winner and which side is the loser as indicated by performance during the argumentation stage of both parties. But it is also possible to devise formal models of argumentation, such as version 4 of Carenades (see section 7), in which there are sub-issues of the main issue that can evolve during the argumentation stage.

Einhorn (1986, p. 291) brought out these dialectical aspects of Whately's notions of presumption and burden of proof when she wrote that they function as 'game rules', telling the participants in argumentation what they need to do in order to win. In her interpretation, Whately believed that his notions of presumption and burden of proof were important because they would make audiences aware of their responsibilities and rights concerning how to put forward arguments and respond to them. For example, one of Whately's most insightful pieces of advice was that it is often best, instead of trying to counterattack your opponent by proving that his argument is wrong, to simply question what right he or she has to make such an accusation (Whately, 1846, 113). Such a strategy depends on understanding the notions of burden of proof and presumption.

Godden and Walton (2007, p. 317) remarked that "perhaps the most interesting feature of Whately's theory of presumption is that it is closely tied to the idea of expertise and epistemic authority in a particular discipline or area of knowledge". They quoted the following passage from (Whately, 1846, p. 118) to support this statement.

> The person, Body, or book, in favour of whose decisions there is a certain Presumption, is said to have, so far, 'Authority'; in the strict sense of the word. And a recognition of this kind of Authority, - an *habitual* Presumption in favour of such a one's decisions or opinions, - is called 'Deference'.

Godden and Walton noted that Whately's point on this matter, if correct, could shed some light on the workings of arguments from authority. Whately clarified his view of the connection between presumption and authority even more explicitly when he wrote that "there is … a presumption, (and a fair one,) in respect of each question, in favour of the most eminent men in the department it pertains to" (p. 128). Assuming that 'eminent men' refers to men who are eminent in some domain of knowledge requiring expert skill and accomplishment, these remarks link presumption, burden of proof and authority to argument from expert opinion.

In a framework of argumentation now widely applied in artificial intelligence models (Walton, 2014) it is assumed that the dialogue has an opening stage where a global burden of proof is set. This global burden of proof applies to the whole dialogue right up until the closing stage (Gordon, Prakken and Walton, 2007). This burden of proof determines which side has won and which side has lost the dialogue, or whether there is a tie. Let's say for the purpose of this example that this global burden of proof is set equally for both sides. This means that if the one side proves its ultimate claim and the other does not, by the closing stage, the one that has proved its ultimate claim wins. There need to be different kinds of rules governing the dialogue. For example, there need to be rules governing which kinds of speech acts are permissible at each move and what kinds of responses are allowed by the other party replying to the first party speech act. For example, there is the speech act of assertion, consisting of the putting forward of the claim that a particular proposition is true by one or the other of the parties. In response to this move, the respondent is allowed to ask a why question, a speech act essentially asking the proponent to provide an argument to back up her claim. There is also the turn taking rule, requiring that each party is only allowed to put forward one speech act in a given move.

In the example in table 2, the proponent opens the dialogue by asserting her claim that a painting is a genuine Leonardo da Vinci. The respondent then asks her to prove it. This move puts the local burden of proof, the so-called evidential burden, on the proponent. There is now a presumption in favor of the respondent's side of the persuasion dialogue. But at the second move, the proponent meets her burden of proof by putting forward an argument from expert opinion to support her claim. Now, in Whately's terms, the proponent has preoccupied the ground. But then when his turn comes at the same move, the respondent puts forward an opposed argument from expert opinion which is the contrary of the one that is put forward by the other side. The outcome is a deadlock. Unless the one argument is stronger than the other, which it is not, as far as we are told, neither side can win at this point unless further moves are made.

It is the proponent's turn at move 3, and she makes the assertion that expert Bob is not trustworthy. The respondent asks her to prove it. The evidential burden of proof is now again on the proponent. However, at move 4 the proponent fulfills her burden by providing an argument stating that Bob has a criminal record for forgery. This seems like a good argument, and so the burden of proof shifts back to the respondent. But the respondent makes no move that would meet the burden of proof required to rebut or question the proponent's assertion. Hence by default, according to the burden of proof rules for the dialogue, the proponent wins. Of course it is possible that the dialogue could be reopened if the respondent were to finally come up with a counterargument that casts the proponent's evidential claim into doubt. Other moves are also open to the respondent if there is a possibility of continuing the dialogue. He could bring forward a different argument from expert opinion which would once again cause a deadlock.

Move	**Proponent**	**Respondent**	**Burden of Proof**
1	The painting is a genuine Leonardo.	Prove it!	*On Proponent*
2	Expert Alice says it is.	Expert Bob says it isn't.	*Deadlock*
3	Expert Bob is not trustworthy.	Prove it!	*On Proponent*
4	Bob has a criminal record for forgery.	No further move	*Shifts to Respondent*
	Closing of Dialogue	Proponent wins	

Table 2: Shifting of a Burden of Proof from Side to Side in a Dialogue

This tabular form of representing a sequence of argumentation brings out especially well Whately's idea of how burden of proof relates to presumption, deference, and authority. At one point in the sequence, one side occupies a ground, but when a next move is made there is shift in the burden of proof so that the other side now occupies the ground. To dislodge the party who now occupies the ground, the other side must make a move that shifts the burden of proof back.

In section 6 below we will show, using the example of table 2, how the method of argument evaluation used in current formal argumentation models in artificial intelligence can be applied to map a dialogue, such as the one shown in table 2, to an argument diagram representing the structure of the argumentation woven through the dialogue. But before that, we have to explain how the use of the argument from expert opinion in the sequence of argumentation shown in table 2 relates to the argumentation scheme for this form of argument.

Whately (1846, p. 118) supported the view that presumptions can admit of varying degrees of strength, and he used his key notion of deference to indicate the strength of a presumption (Gronbeck, 1966, p. 15). Moreover, it is important to note that Whately (1846, p. 118) linked deference to authority: in Whately's view, the possession of authority by a person,

body or book as brings with it by inference a habitual presumption in favor of any pronouncement made by that authority, a presumption that obliges the hearer to defer to the opinion of the authority. One special kind of appeal to authority recently the subject of considerable study in argumentation is the argument from expert opinion. There is an argumentation scheme for this form of argument, and to explain how the argumentation in the dialogue in table 2 can be evaluated, we need to digress slightly to explain this scheme.

Section 5 will give us a summary of how argument from expert opinion is modeled as an argumentation scheme in contemporary argumentation theory. This puts us in a position to understand Whately's contribution in a more precise way by seeing how argument from expert opinion can be questioned or attacked by countermoves in a discussion, and how this relates to burden of proof and presumption.

5. Arguments from Expert Opinion and Deference

In current argumentation studies, the procedure for evaluating arguments from expert opinion works in outline as follows. First, the argument analyst applies the argumentation scheme for the argument from expert opinion to the particular instance of this form of argument to be evaluated. This form of argument has its characteristic premises and conclusion. This scheme can have simpler or more complex forms, depending on the granularity of the argumentation in the text to be analyzed. For our purposes here we can use an even further simplified version of the simplest so-called heuristic form of the scheme. The premises state (1) that so-and-so is an expert in the right field of knowledge matching that expressed in the claim at issue, and (2) the expert has stated that the claim is true. Used in a dialectical setting, the claim put forward by the expert will be relevant to a global issue that is part of a critical discussion between two parties whom we will call the proponent and the respondent. The proponent is supporting her ultimate claim, the ultimate proposition to be proved by her in the dispute, while the respondent has the role of either casting doubt on her attempts to prove it, or of trying to prove the opposite proposition.

An argument from expert opinion is a defeasible form of argument, meaning that once the proponent has put forward an argument in a given instance, the respondent can attack and defeat it by putting forward counterarguments or even by asking critical questions that cast doubt on the argument. The following version of the scheme for argument from expert opinion was given (Walton, Reed and Macagno, 2008, p. 310) as follows.

Major Premise: Source *E* is an expert in subject domain *S* containing proposition *A*.
Minor Premise: *E* asserts that proposition *A* is true (false).
Conclusion: *A* is true (false).

The six basic critical questions are formulated as follows (Walton, Reed and Macagno, 2008, 310).

Expertise Question: How credible is *E* as an expert source?
Field Question: Is *E* an expert in the field *F* that *A* is in?
Opinion Question: What did *E* assert that implies *A*?
Trustworthiness Question: Is *E* personally reliable as a source?
Consistency Question: Is *A* consistent with what other experts assert?
Backup Evidence Question: Is *E*'s assertion based on evidence?

The critical questions work as devices for evaluating an argument from expert opinion. When a respondent asks a question, it can defeat the original argument unless the question is answered adequately. But once the question has been answered adequately, the argument tentatively stands until further critical questions are asked about it. As more critical questions are asked and answered appropriately, the argument gets stronger.

We defer to authorities, especially if the authority is a certified expert in a domain of knowledge and is making a pronouncement that falls within that domain. But this deference only arises from a defeasible presumption in favor of the authority. If one of the critical questions is asked, and the expert does not respond appropriately, the presumption in favor of what the expert said is defeated. But it is a well-known problem that since authorities habitually command deference, not least because of their superior knowledge of a scientific or technical field, we tend presume that what they say is right. This habitual deference has been called the halo effect. Hence appeal to authority is an informal fallacy (*argumentum ad verecundiam*) in instances where this deference is used to suppress the asking of appropriate critical questions. In order to help develop a method to tell us which cases of argument from expert opinion are legitimate and which are fallacious, the underlying concepts of burden of proof have to be addressed.

Hansen's explication (2006, p. 326) emphasizes Whately's remark in *Elements of Rhetoric* (1846, p. 120) that deference is a psychological notion that depends on personal feelings. Such a remark ties in with work on the power of appeal to authority in the social sciences, which has emphasized that a certain type of personality is prone to accepting the pronouncements of a source that seems to be authoritative without questioning it (Walton, 1997, 243-245). This psychological analysis could help to explain why appeals to authority of any kind, whether epistemic or administrative or both, tend to have such a strong power and can tend therefore to be associated with fallacies. If the respondent to an argument has a tendency to defer to it, that certainly may be the main reason why he or she fails to critically question it in a situation where critical questioning would be appropriate and useful.

The problem about burden of proof and presumption that arises in such cases is one of how to evaluate the asking of critical questions by settling the issue of burden of proof. This issue can be explained by posing a question. If the respondent asks a critical question, the mere asking of the critical question may be sufficient to defeat the original argument from expert opinion, or is it necessary in order for the respondent to defeat the argument to in addition, to bring up some evidence to support the question? The latter requirement sometime seems necessary because the respondent can easily shift the burden of proof back to the proponent's side very easily by stating that the respondent has no right to ask that question, since there was no evidence offered to back it up. The proponent can deflect the question automatically by stating that. This move is a classic case of Whatelian preoccupation of the ground.

6. Mapping dialogues into graphs in formal argumentation systems

This problem is a difficult one for attempts to model defeasible arguments, such as the argument from expert opinion, by using the normal argumentation resources such as argument diagrams. Statements can be represented as nodes in such diagrams, but it is much more difficult to represent questions in them and so far there has been no standard procedure of argument diagramming developed that has been widely accepted as a means of modeling question-asking. The solution put forward by Walton and Gordon (2005) was to model the critical questions in the

Carneades Argumentation System as implicit premises in the argumentation scheme, producing a more complex version of the scheme. Carneades distinguishes different ways the critical questions matching an argument from expert opinion are represented on an argument diagram. According to one approach on how a normative model should work (Walton and Godden, 2008), in a case where the respondent asks any one of these critical questions, the burden of proof automatically shifts back to the proponent's side to provide an answer, and if she fails to do so, the argument defaults (is defeated). According to the other theory of how a normative model should work (Walton and Godden, 2008), asking a critical question should not be enough by itself to make the original argument default. On this theory, the question, if questioned, needs to be backed up with some evidence before it can shift any burden of proof that would defeat the argument. Of course, some may not agree with either normative model. But the burden of proof is on them to provide a better model, or exit the discussion.

Two questions can be given as examples. On the opinion question, if the proponent fails to supply a proposition supposedly representing what the expert claimed, her argument should default. Ideally she should provide a quotation stating exactly what the expert said or wrote. The proposition attributed to the expert needs to match the meaning of what the expert said or wrote for the argument to survive critical examination. Otherwise it fails. On the trustworthiness question, however, the critical question needs to be backed up by evidence if challenged. Unless the respondent gives some evidence indicating that the expert is untrustworthy, the proponent could simply reply, "Without evidence this attack is outrageous and uncalled for". This move shifts the burden of proof to the respondent's side to back up his question with evidence.

This way of modeling the argumentation scheme for argument from expert opinion enables the argument analyst to evaluate a given instance of an argument from expert opinion by treating it as a sequence of argumentation in a graph structure, essentially an argument diagram (Scheuer et al., 2010).

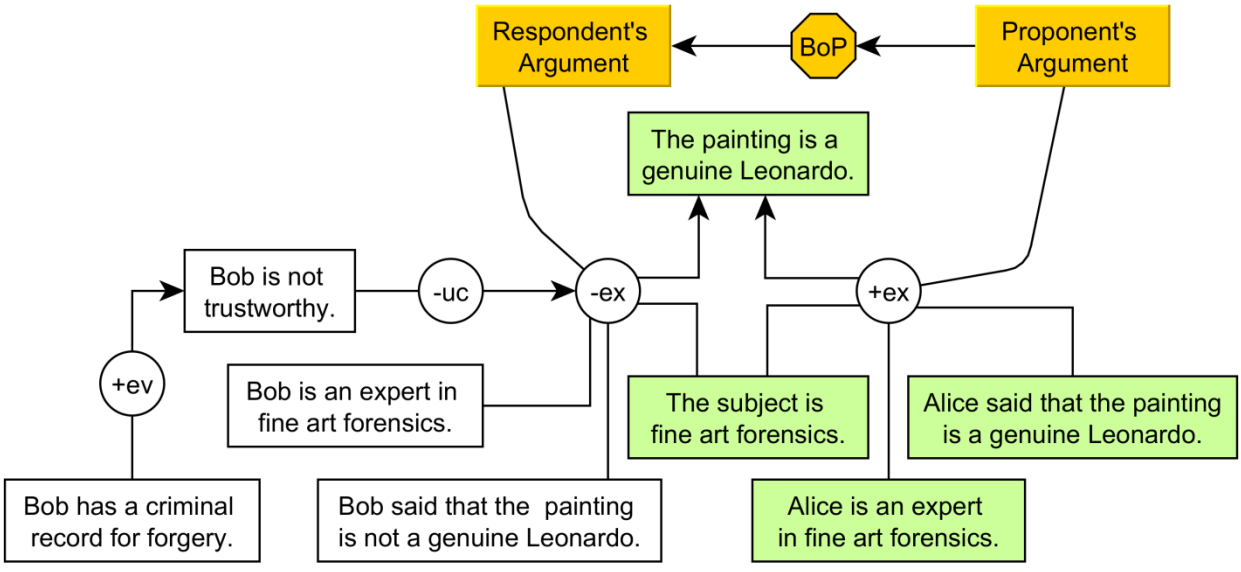

Figure 1: Argument Diagram of the First Phase of the Argument in Table 2

The interaction between the proponent and the respondent can be modeled as a series of countermoves by the respondent undercutting or refuting the proponent's original argument. The

proponent's replies, or his failure to respond appropriately, can also be modeled in a graph structure. It is this very graph structure that Carneades uses as the basic tool to apply its method of argument analysis and evaluation. Next it is shown how the shifting of preoccupation of the ground takes place by a sequence of presumptions that move from side to side in the example persuasion dialogue in table 2. This example can be mapped into a sequence of argument diagrams so that the argumentation sequence can be evaluated in a formal and computation system of argument evaluation such as Carneades. The first argument diagram in the sequence is shown in figure 1.

The sentences in the rectangular nodes are premises and conclusions. The circular nodes contain argumentation schemes and other information about an argument. A pro argument (supporting its conclusion) is represented by a plus sign in its node. A con argument (attacking its conclusion) is represented by a minus sign in its node. The ultimate proposition to be proved (or disputed) is shown at the top of figure 1. There are two arguments from expert opinion (denoted by ex) supporting it. They share a common premise, the proposition that the subject is fine art forensics. On the left there is an undercutting argument (denoted by -uc) attacking the argument from expert opinion. This con argument represents the asking of the trustworthiness critical question. To defeat the argument it is aimed at, this attacker needs to be backed up by some evidence (+ev). As shown, it is backed up by the statement that Bob has a criminal record for forgery. If questioned, this claim could in turn be backed up by evidence, such as court records.

How is the argument evaluated in Carneades? Let's say that all three premises in the arguments from expert opinion shown on the right are accepted. To indicate that the audience accepts these three propositions, they are shown in the rectangles with a green (light gray in the printed paper) background. Assuming that the pro argument from expert opinion meets the requirements for the argumentation scheme for this type of argument, Carneades automatically shows the proposition that the painting is a genuine Leonardo in a green background, as shown in figure 1.

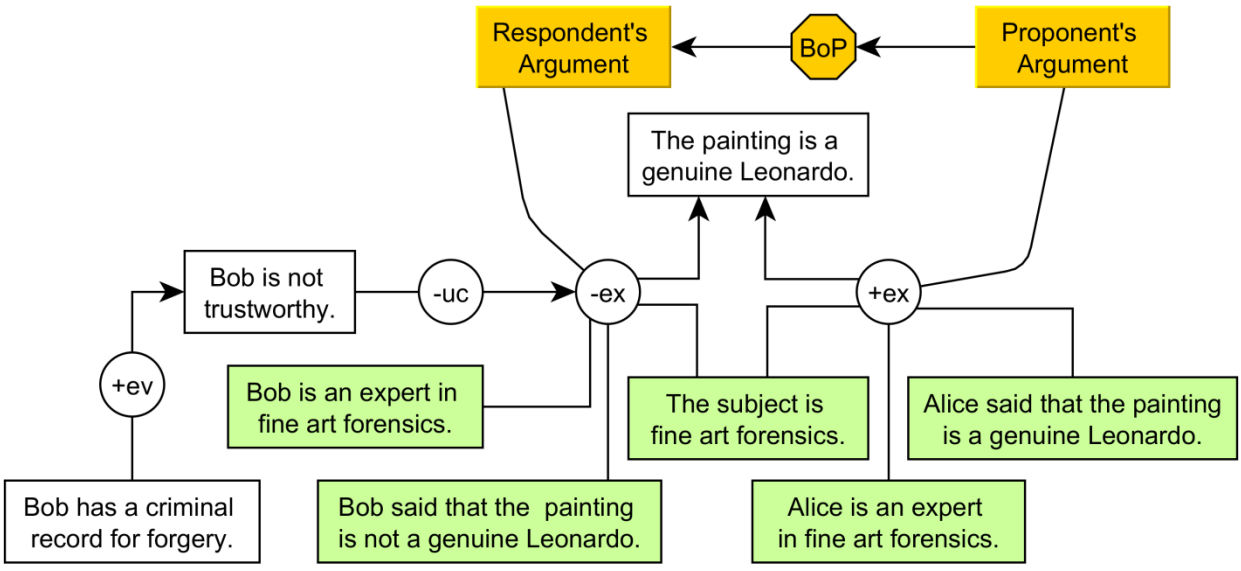

Figure 2: Argument Diagram of the Second Phase of the Argument in Table 2

This situation has the effect of shifting the burden of proof from the proponent's side to the respondent's side. In Whatelian terms, the proponent's use of the argument from expert opinion has shifted the burden of proof to the side of the respondent. Now it is the proponent who occupies the ground and the respondent has to make some appropriate move in order to regain the initiative in the dialogue.

Next we turn to figure 2 to see what effect the respondent's move of replying with an opposed expert opinion has. In his reply, the respondent puts forward an opposed argument from expert opinion claiming that expert Bob says that the painting is not a genuine Leonardo. Let's assume that the audience has accepted all three premises of the con argument from expert opinion (-ex) shown in the middle of figure 2. This con argument attacks the conclusion that the painting is a genuine Leonardo. Let's say that the argument meets the requirements for the scheme for argument from expert opinion. Therefore, since all three premises are accepted, the conclusion that the painting is a genuine Leonardo is now cast into doubt. To put the point in a different way, there is a deadlock between the two opposed arguments from expert opinion. The one argument refutes the other, hence there is no longer support for the ultimate conclusion that the painting is a genuine Leonardo. Hence this proposition, which was shown with a green background in figure 1, is now shown in a white background in figure 2. In other words this proposition was formally accepted, but now it is neither accepted nor rejected.

Next we have to see what happens once we progress in the dialogue to the proponent's argument at move 3.

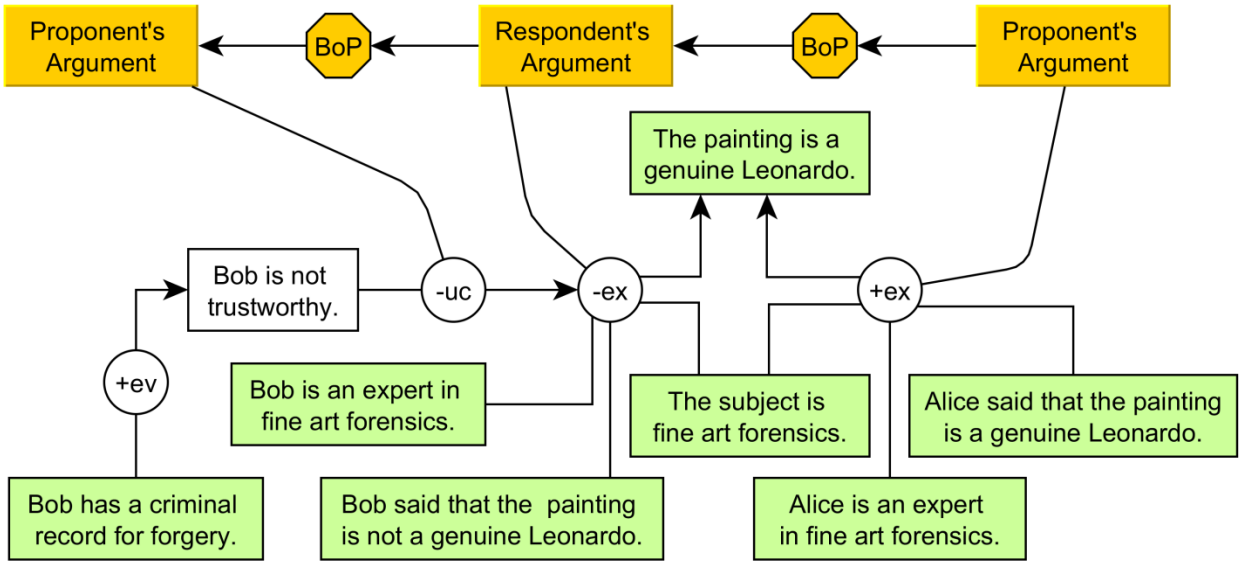

Figure 3: Argument Graph of the Second Phase of the Argument in Table 2

As shown in figure 3, the proponent makes the move (her move 3 in table 2) of arguing that Bob is not trustworthy. Essentially she is posing the trustworthiness critical question in the list of critical questions attaching to the scheme for argument from expert opinion. This critical question is modeled by Carneades as an undercutter, marked by the notation -uc in figure 3. Some argument refutations work by attacking the conclusion of the original argument directly (rebuttal), while others attack a premise of the original argument. An undercutter works by attacking the inferential link between the premise and the conclusion (Prakken, 2011). Is this

undercutter successful as a refutation and how does it affect the distribution of the burden of proof in this example?

The undercutting attack on the con argument from expert opinion only provides a successful refutation of this argument if it is backed up by evidence. Let's suppose that in the example the audience accepts the proposition that Bob has a criminal record for forgery. Hence in the argument diagram in figure 3 this proposition is shown at the bottom left with a green background. Assuming that the argument link between this proposition and the conclusion that Bob is not trustworthy is defeasibly valid, Carneades automatically places the proposition that Bob is not trustworthy in a green background. The system draws this inference automatically. Once these conditions are met, the undercutter refutes the con argument from expert opinion based on the appeal to the opinion of an expert Bob. Now what is shown in figure 3 is that this con argument is refuted and therefore the system automatically shows the proposition that the painting is a genuine Leonardo with a green background, indicating that it is accepted. To sum up, we originally had a deadlock between two opposed arguments from expert opinion, but the deadlock was broken by the undercutting argument alleging that Bob is not trustworthy as an expert. As shown at the top left of figure 3, the burden of proof has shifted from the respondent's side to the proponent's side. But the proponent has met her burden of proof by supporting her undercutting critical question with evidence. Hence in the end the preoccupation of ground is taken up by the proponent's side and the proponent wins the persuasion dialogue.

The general point made here is that modern formal argumentation systems of the kind currently being used in artificial intelligence give us a method of analyzing and evaluating dialogues of this sort. Whately was concerned with arguments that involve shifting presumptions and burdens of proof, especially in cases where deference to an authority is a key part of the argument. The method has two steps. The first step is to model the changing preoccupation of ground as a shifting of burdens and presumptions from side to side. The second step is to build a sequence of argument diagrams that display the premises, conclusions, inferences, and argumentation schemes, such as argument from expert opinion. This sequence of argument diagrams can then be used as a basis to track the shifts of presumptions and burdens from one side to the other in the sequence of argumentation. Finally, the sequence of argument diagrams can be used to determine which side prevailed at each phase, and at the final phase.

7. Conclusions

Whately's remarks connecting burden of proof, presumption and argument from expert opinion throw light on some problems of recent research in formal argumentation systems, but formal argumentation systems also throw light on Whately's views on presumption and burden of proof. His insights into the connections between burden of proof, presumption and argument from expert opinion finally begin to make sense when viewed in this modern perspective and vice versa. The two approaches reinforce the comprehensibility of both of them.

The problem posed but not solved by Whately's approach is how to keep track of, and rule on, moves in a sequence of dialogue where presumptions shift back and forth. This problem is shown to be solved by applying argumentation methods recently developed in studies in artificial intelligence, in particular by using two tools, argument diagrams and sequences of dialogue that can represent shifts in a burden of proof and presumption as a sequence of argumentation between two parties moves forward. The method used in this paper was to map such a sequence of dialogue into an argument diagram. The effect of putting a presumption in

place by means of using an argument fitting a defeasible argumentation scheme is that certain requirements framed by the dialectical nature of the exchange between the two parties kick into place. In particular, requirements of burden of proof appropriate for the dialectical exchange, set into place at the opening stage, determine shifts in a burden of proof from one side to the other and back (Walton 2014). The party who initially brings the action or makes the ultimate claim has the burden of proof of supporting it with arguments, and this burden is shifted back and forth by presumptions as the sequence of argumentation proceeds. The method applicable to tracking and evaluating such shifts in a sequence of argumentation was to map a dialogue containing the shifts into an argument diagram especially designed for this purpose.

It was shown in this paper how such recent developments in research on formal and computational argumentation systems in artificial intelligence offer a way of embedding Whately's useful practical observations into a broader theory of argumentation. The current method of analyzing and evaluating arguments from expert opinion, a species of argument from authority, use the device of an argumentation scheme representing the form of this kind of argument along with the matching set of critical questions. Asking the critical question shifts a burden of proof against the proponent of the argument from expert opinion in some instances. In other instances, asking the question only defeats the original argument if some evidence backs up the counterargument posed by the critical question. But if deference to the authority is asked for and granted in an absolutist way that makes it difficult or even impossible for the respondent in the dialogue to ask appropriate critical questions in response to an argument from authority, we are confronted with a case of the *ad verecundiam* fallacy. By linking the notions of authority and deference to shifts of presumptions and burden of proof, Whately's approach offers insight into the dialectical task of separating the fallacious from the reasonable instances of argument from authority.

Normally the way to discharge a burden of proof in a rational persuasion dialogue is for the party who makes a claim to present the appropriate kind of evidence needed to support the claim. One way to do this might be to use certain kinds of arguments, such as arguments based on expert opinion, arguments based on testimony, arguments based on scientific evidence, such as forensic evidence, and so forth. However, if the argument from expert opinion is combined with an administrative argument from authority, especially one where the authority has such a settled reputation so that he or she is established as a dignified source whose work could hardly be challenged, this may be enough to shift the burden of proof to the other side. In such a case, there is such a presumption on the side of the source that drives the argument forward, even if the argument from expert opinion is weak or poorly executed from a point of view of evidence of the kind that should be required to support it. Here, in other words, the fallacious case supports a confusion between the two types of appeal to authority where the power of the administrative appeal is strong enough to mask the deficiencies of the epistemic appeal, which is supposed to be based on the knowledge of the expert and not just his or her administrative position. This kind of confusion is a key indicator of the *ad verecundiam* fallacy.

It has been shown in this paper how the evaluation of arguments from authority makes use of the Whatelian notion of deference. Authorities command deference, on this analysis, and the psychological phenomenon that people confronted with appeals to authority tend to defer to them, provide part of a good explanation of why this kind of argumentation becomes fallacious in some instances. The proponent of such an argument expects deference and may often or even normally be expected to get it, so that if the respondent to the argument tries to question it, he

may find that his critical questions are simply dismissed, either by the proponent or by the wider audience following the argumentation.

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